



Agency for Healthcare Research and Quality  
Advancing Excellence in Health Care



Oklahoma Physicians Resource/Research Network

OKPRN

# Engaging Patients and Primary Care Clinicians Through a Wellness Portal to Improve the Health of Oklahomans

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# Wellness Portal Project

(09/01/2007 – 08/31/2010)

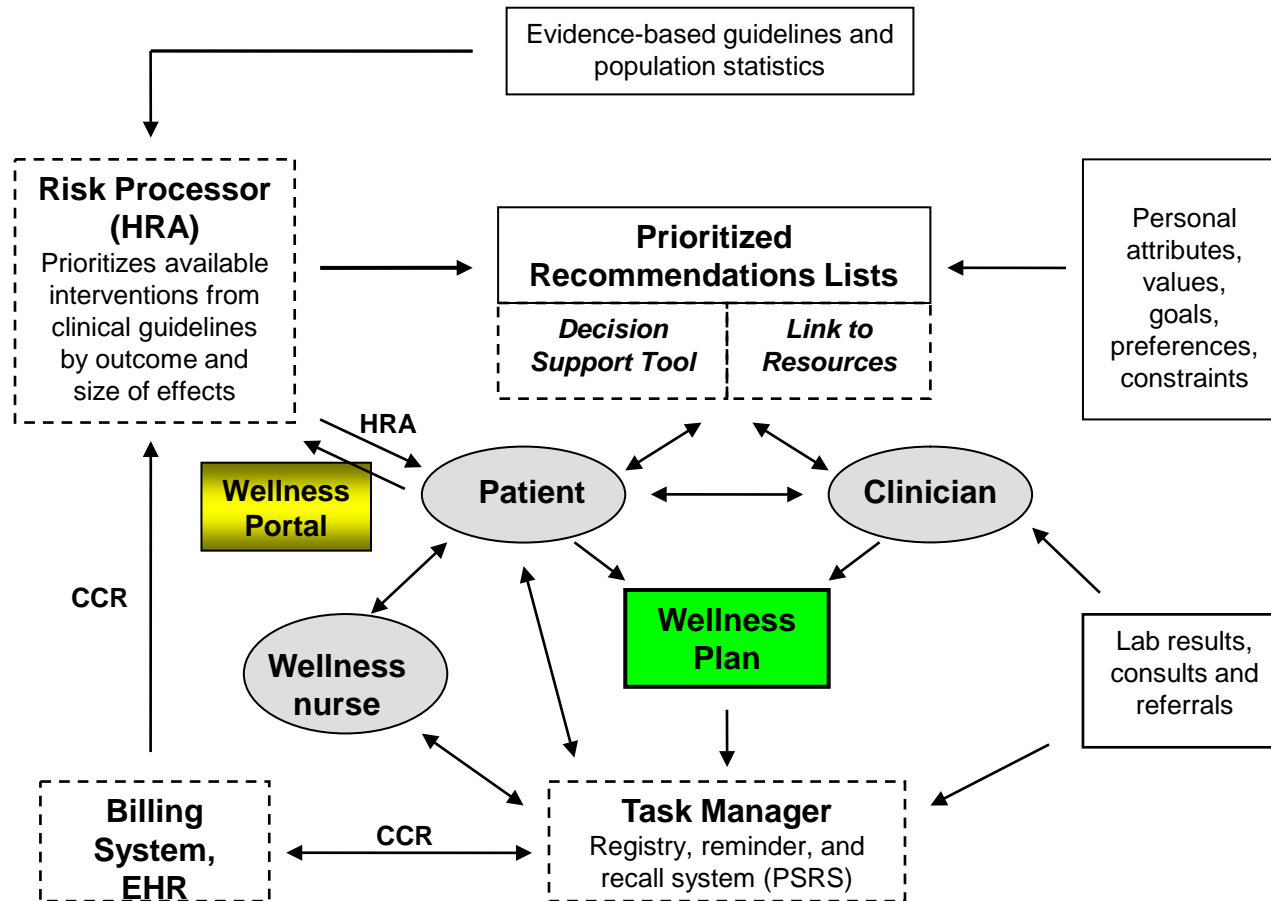


AHRQ Grant 1R18HS017188-01 “*Impact of a Wellness Portal on the Delivery of Patient-Centered Prospective Care*”

## Phases:

- Design, development, and a 6-month pilot study (2008-09)
- A 12-month randomized controlled trial; N=560 (2009-10)
- Dissemination of delivery model and technology (2010)

# The “Big Picture”: Integration Into Primary Care



HRA: Health Risk Appraisal; EHR: Electronic Health Record; CCR: Continuity of Care Record  
PSRS: Preventive Services Reminder System

# Options for Engagement: Wellness Portal Features



## My Wellness Portal

Department of Family and Preventive Medicine  
at the University of Oklahoma Health Sciences Center

Welcome ZSOLT! What Is Your Healthy Choice Today?



Maintain My Personal Profile



Update My Preventive Services History



Edit My Risk Factors And Personal Preferences



Review My Personalized Wellness Plan



Chart My Weight, Blood Pressure, Sugar & Cholesterol



Create And Work On My Symptom Diary



Update My Medical Encounters History



Manage My Medication List



Communicate Securely With My Primary Care Clinician



Download And Print My Immunization & Wellness Record

Family Account 


Sign Off 



Did you know?

Even if you lose only a couple of pounds it may have a significant impact on your health.

# Personalized Wellness Plan: The Unit of Success





## My Wellness Portal

Department of Family and Preventive Medicine  
at the University of Oklahoma Health Sciences Center

[? HELP](#)

GRANDPA 4/5/1939

 Print Recommendations  
 Browse Handout Library

Immunizations Due For You Today ( 1/20/2010 )	English	Select Education Materials	Spanish
<ul style="list-style-type: none"> <li>Adult dT ?</li> </ul>	<input type="checkbox"/>	Tetanus and Diphtheria(Td)	<input type="checkbox"/>

Preventive Services Due For You Today ( 1/20/2010 )	English	Select Education Materials	Spanish
<ul style="list-style-type: none"> <li>ACEI in diabetes ?</li> <li>Aspirin ?</li> <li>Colon Cancer Screening ?</li> <li>Diabetes education ?</li> <li>Eye exam ?</li> <li>Foot exam ?</li> <li>HbA1c ?</li> <li>PSA ?</li> <li>Seatbelt use ?</li> <li>Urine for microalbumin ?</li> </ul>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> <li>Colon Cancer Screening</li> <li>Diabetes education</li> <li>Eye exam</li> <li>Foot exam</li> <li>Blood sugar monitoring</li> <li>PSA</li> <li>Seatbelt Use/Auto Safety</li> </ul>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

[Back to Menu](#)
[My Wellness Plan](#)
[Print Materials](#)





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# Connected Health Risk Appraisal: A Starting Point

215 personal risk factors are gauged across 13 domains of health in ~20 minutes via a new-generation HRA

Hide Menu

Personal Profile

Vital Signs & Labs

Behavioral Health

Environmental Health

Self-Health History

Family Health History

Healthcare Utilization

Allergies & Misc. Risks

Personal Safety

Sexual Health

Mental Health

Prevention History

Personal Life Goals

Wellness Portal Health Risk Appraisal (13% complete)

GRANDPA 4/5/1939

What is your weight now?  
Weight: 160 Unit: pounds (lbs)

What is your height now?  
Height: (feet) 70 (inches or cm) Unit: feet/inches (in)

This is your body-mass index (BMI) or BMI percentile calculated from your weight and height: 22.96 << Fill in the form above with numbers to calculate this value

What is your waist circumference or measurement of your waist (optional)?  
Waist: 27 (inches or cm) Unit: inches (in)

What is your most recent total cholesterol (approximate)? 150-160 (mg/dL)

What is your most recent LDL cholesterol or 'bad cholesterol' (approximate)? 160-170 (mg/dL)

# Goal-directed Care Through Shared Decision-Making

Clinician Report: evidence-based and clinical (life expectancy)

Patient Report: practical, and helpful (Real Age, Wellness Score)

GRANDPA 4/5/1934 (76 years old)

Your estimated **"RealAge"** is: **83.3 years**.  
This means that although your calendar age is 76 years, your body is as "old" as that of an average 83.3 year old in your peer group (same age, gender, and ethnicity).



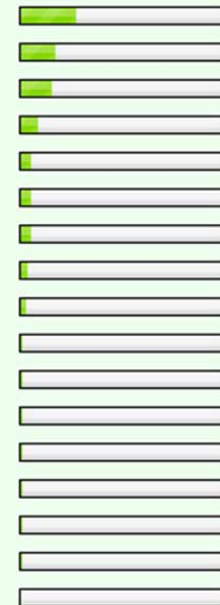
Your **Wellness Score** is: **77.1** A score of 100 means "average" health. Less than 100 shows worse than average, while over 100 indicates better than average health.



## Preventive Services

## Share of Benefit ?

Physical activity improvement  
Weight control  
Blood pressure control (~130/85)  
Low dose aspirin  
Adjusting sleeping time  
Lipid control (LDL<130; HDL>45)  
Blood sugar control  
Foot exam  
Eye exam  
Diabetes education  
ACE inhibitor medicine in diabetes  
Adult dT  
Average blood sugar (HbA1c)  
Colonoscopy  
Sun exposure protection  
Urine for microalbumin  
Healthier diet



# Most Significant Challenges in Portal Participant Engagement



- 1) Gaps in access and basic computer or Internet literacy in various populations (tiers of Internet use)
- 2) Understanding secure account management (“I lost my *strong* password again”): a perpetual problem
- 3) “When is the study over?” The radical idea of lasting change is a care delivery paradigm shift
- 4) Keeping Portal users engaged in a periodic care environment: could healthier people benefit?



# Understanding Our Audience

## Who Is the Average Patient? Is He/She Prepared?

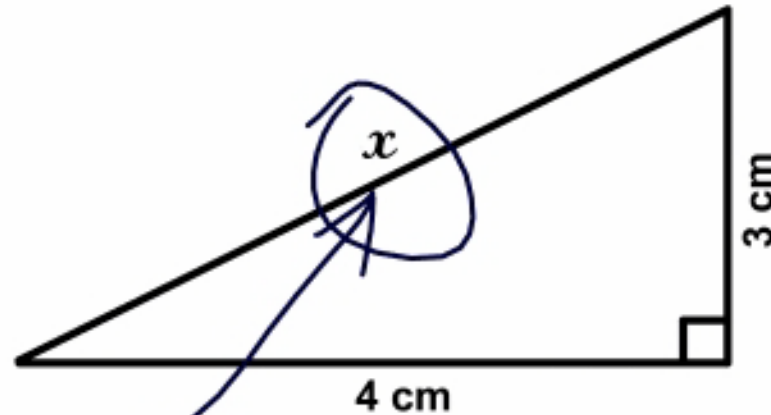


- Mean household income is ~\$60K (median is ~\$50K)
- Post-tax expenses ~ 80% of pre-tax income (95% of median income)
- Minimal assets left over for out-of-pocket expenses
- High school graduate, may have “some” college education
- Reads at 6th-8th grade level
- Roughly 30%-50% chance of being “health illiterate,” or “innumerate”, “computer illiterate” or all of the above
- Well “trained” to demand usual (inefficient) health care

# The Human Mind Has No Limits

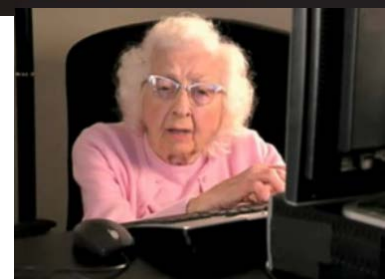
*“The difference between genius and challenged is that genius has its limits.” - Albert Einstein (paraphrased)*

**3. Find  $x$ .**



*Here it is*

## The Intricacies of Computer and Internet Literacy



~70% Internet and e-mail use in the Medicare population in rural(!) Oklahoma\*, BUT:

Tier I user: “I click on this thing and it takes me to my e-mail.”

Tier II user: “I browse the Internet regularly for health and provider information.”

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Tier III user: “I can manage a secure web-based account and communicate with my doctor online.”

Tier IV user: “I am a geek. I know how stuff works, so errors and glitches usually can’t stop me.”

## Addressing Access and Computer / Internet Literacy Problems

- Offering a variety of options to interact with the Portal (home, public library, office kiosk, wireless tablet, web-enabled cell phone, involving family)
- Proactive screening for web utilization tiers and offering a corresponding mode of education / training (from standard website help to brief personal training)
- Early identification of usual barriers and inclusion of helpful tips in general communications and web design



## Addressing Account Management Issues & Knowledge Gaps

- Achieving a painstaking balance between security and usability (e.g. pre-created accounts; temporary e-mailed passwords; single sign-on from practices)
- Proactive anticipation of account management problems from security logs and offering individualized help (even before user might ask)
- Audio-visual context-sensitive help and tiered user education about best practices and reasons for balancing security measures with ease of use

## Addressing Practice Transformations and Lasting Change: “Meaningful Use”

- #1 lesson from health IT experiences: disconnected technologies don't work well and won't last (health IT integration into the process of regular care delivery)
- Practice redesign is an essential part of implementing enabling technologies (HIT - the engine of PCMH)
- New system of care delivery and IT use must become the new standard of care (“usual” practice)
- Practices need help: practice facilitators are agents of change working via health/IT extension centers

## Addressing the Problem of Maintaining the Level of Engagement

- Connecting periodically used clinical systems to regular patient activities: payment, scheduling, results feedback, and communication (added value)
- Aligning financial incentives with technology use (e.g. double incentive for adherence to wellness plan)
- Providing just-in-time guidance and useful health information (e.g. influenza self-management toolkit)
- Incorporating social media to involve the community in the wellness process (“the wisdom of the crowd”)

# Summary of Achievements

## Interventions that Improved or Helped Sustain Patient and Practice Participation – *Value to Patients & Practices*

### Patients:

- Tiered and context-sensitive online help & patient education
- Interactive and context-sensitive video Portal tutorial
- Short Portal demo video looped in the waiting room
- 24/7 easy access to technical support (phone and e-mail)
- Periodical e-mail reminders and recommendations (newsletter)
- Intelligent problem discovery and proactive user assistance
- Patient wellness record is available as a PHR (in CCR format)

### Practices:

- Extensive in-practice training and careful process redesign
- Audiovisual practice training materials (role-based)
- Continuous access to a practice facilitator (PEA)



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PSRS PDA Prototype  
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